

The Talaria Company, LLC)	Departmental
d/b/a The Hinckley Company, LLC)	Findings of Fact and Order
Hancock County)	Air Emission License
Southwest Harbor, Maine)	
A-754-71-D-R/A (SM))	

After review of the air emissions license application, staff investigation reports and other documents in the applicant's file in the Bureau of Air Quality, pursuant to 38 M.R.S.A., Section 344 and Section 590, the Department finds the following facts:

I. REGISTRATION

A. Introduction

The Talaria Company, LLC d/b/a The Hinckley Company, LLC (Hinckley) of Southwest Harbor, Maine has applied for a renewal and amendment of their Air Emission License, permitting the operation of emission sources associated with their boat manufacturing facility, in Southwest Harbor. The amendment portion of the license includes a request to increase the #2 fuel oil limit.

B. Emission Equipment

Hinckley is authorized to operate the following air emission units:

Fuel Burning Equipment

Unit Identification	Maximum Heat Input Capacity (MMBtu/hr)	Fuel type	Firing Rate (gal/hr)
Boiler #1 (Main Building)	1.9	#2 fuel oil	13.6
Boiler #2 (Main Building)	1.9	#2 fuel oil	13.6
Boiler #3 (64 Building)	1.6	#2 fuel oil	11.4
Boiler #4 (Fiberglass Building)	1.7	#2 fuel oil	12.3
Boiler #5 (Fiberglass Building)	1.8	#2 fuel oil	13
Make-up Air Heater (Production Spray Booth)	2.5	Propane	27.3
Make-up Air Heater (Production Spray Booth)	2.5	Propane	27.3
Make-up Air Heater (Service Spray Booth)	1.3	Propane	14.4

Note: The Hinckley Company operates other small boilers and heaters less than 1.0 MMBtu/hr heat input capacity and are noted for inventory purposes only.

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Process Equipment

Emission Unit	Type of Equip.	2003 Process Rate	Stack	Control Device
Fiberglass Lamination and Gelcoat Application	Spray guns and vacuum infusion	42,000 lbs of resin and gelcoat used in 2003	N/A	None
Assembly and Maintenance	Job shop	--	N/A	Cyclones
Surface Coating Operations	Spray Guns	7,500 lbs of varnish, paint and AWLGRIP used in 2003	N/A	None

Control Device Description

Emission Unit	Control Device	Pollutant Controlled	Capture efficiency	Control Efficiency (%)
Assembly and Maintenance	2 Cyclones	Particulate	unknown	70-80%

C. Application Classification

The Hinckley Company is requesting to increase the annual #2 fuel oil limit from 150,000 gallons to 200,000 gallons. The modification of a minor source is considered a major modification based on whether or not expected emission increases exceed the “Significant Emission Levels” as defined in the Department’s regulations. The emission increases are determined by subtracting the current licensed emissions preceding the modification from the maximum future licensed allowed emissions, as follows:

<u>Pollutant</u>	<u>Current License (TPY)</u>	<u>Future License (TPY)</u>	<u>Net Change (TPY)</u>	<u>Sig. Level</u>
PM	0.2	1.7	1.5	100
PM₁₀	0.2	1.7	1.5	100
SO₂	2.7	5.0	2.3	100
NO_x	3.8	3.9	0.1	100
CO	0.6	0.6	0	100
VOC	35.0	35.0	0	50

This modification is determined to be a minor modification and has been processed as such. With the VOC and HAP limit restrictions from the boat building processes the facility is licensed below the major source thresholds and is considered a synthetic minor.

II. BEST PRACTICAL TREATMENT (BPT)

A. Introduction

1. General

In order to receive a license the applicant must control emissions from each unit to a level considered by the Department to represent Best Practical Treatment (BPT), as defined in Chapter 100 of the Air Regulations. Separate control requirement categories exist for new and existing equipment as well as for those sources located in designated non-attainment areas.

BPT for existing emissions equipment means that method which controls or reduces emissions to the lowest possible level considering:

- the existing state of technology;
- the effectiveness of available alternatives for reducing emissions from the source being considered; and
- the economic feasibility for the type of establishment involved.

Before proceeding with the control requirements for each unit a general process description is provided to identify where the equipment fits into the process.

2. Process Description

Hinckley is located in Southwest Harbor, Maine. Hinckley's primary activities include boat manufacturing and the operation of a full service boatyard providing maintenance, repair and boat storage. The boats are built using primarily gelcoat, fiberglass and resin. Other raw materials include kevlar, carbon fiber, paint, varnish, wood, foam, etc.

For licensing purposes, the manufacturing process is divided into the following process areas: Fiberglass Lamination and Gelcoat Application, Assembly and Maintenance Activities and Surface Coating Activities.

Fiberglass Lamination and Gelcoat Application

The manufacturing of fiberglass boats at Hinckley begins with hull and deck construction, using a combination of the open contact mold and closed mold methods. This portion of Hinckley’s overall boat building process utilizes unsaturated polyester and vinyl ester resins and gelcoats. The resins typically contain a styrene monomer and/or epoxy as the linking agent, which partially volatilize during application and curing. The open contact mold method consists of applying layers of gelcoat or resin impregnated fiberglass reinforcement on an open mold. This process produces the majority of VOC emissions.

The initial step in the lamination process is the spraying of a gelcoat layer on the waxed mold surface. Gelcoating is the application of a layer of resin with no reinforcing materials contained in it. The gelcoat contains unsaturated polyester resin, catalyst, and pigments to create the smooth outer surface of the hull, deck, or part. Upon applying the gelcoat layer to the desired thickness, an initial layer of reinforced fibers is placed with resin in what is referred to as the “skin-coat”. A hose assembly supplies the hand held “chopping” spray gun with resin and catalyst. Fiberglass roving is pulled from bulk containers by the chopper and is guided to the spray gun tip through a series of eyelets on a boom. The fiberglass is applied in 1/2 to 1-inch lengths. The catalyst serves as an initiator of the polymerization reaction. Depending on ambient conditions, an inhibitor may be added to the resin to control gel curing time (i.e. to slow down polymerization reaction time in warm weather). The hull is left to cure following the initial backup layer. After proper curing of the hull, the subsequent layers of reinforced materials such as balsa wood, fiberglass, Kevlar and/or carbon fiber are applied to the hull. The thickness of the lamination depends on both the style of boat and the location within the hull (i.e. high stress areas will have more layers applied). For a part being made using the closed molding technology (vacuum infusion), the structural materials are then covered by plastic and the resin is drawn through the structural materials and allowed to cure. There are no exposed resin surfaces in this closed-mold process; thus VOC emissions are virtually eliminated. An increased rate of polymerization is achieved with the closed mold method relative to an open mold process due to the elimination of airflow across the surface of the product.

Whenever technically and economically feasible, Hinckley uses the closed mold infusion molding process to manufacture the majority of hulls and decks.

Assembly and Maintenance Activities: Including Grinding, Sanding, Buffing, & Welding

Assembly comprises of adhering the deck to the hull, installing equipment including engines, deck hardware, instrument panels, and interior items and built in furniture. Grinding, sanding, machining, and buffing of fiberglass surfaces are performed at this stage. All woodworking and welding are completed on site at Hinckley. VOC emissions result from the use of glues, putties, resins, cleaning solvents, and occasional touch up/repair work. Grinding, buffing, sanding, cutting, etc generate PM10 emissions.

In two locations where carpentry and machining operations take place, particulate emissions are controlled by cyclones and vented outside. In other woodworking areas such as the fine sanding room and the joiner shop, internal dust collection systems control and contain particulates preventing these emissions from being vented to the ambient air.

In addition to building boats, Hinckley is a full service boat yard. Hinckley cleans exterior boat surfaces, prepares boat surfaces for painting, and provides maintenance and storage for existing boats. Potential emissions include VOCs from fiberglass and gelcoat repair, adhesives, and cleaning products. VOCs are also emitted from such operations as bottom painting and painting hull topsides and decks that are further described in the Surface Coating Operations section. Particulate matter may be generated from preparing surfaces that need to be repaired or painted.

Surface Coating Operations

Hinckley has several designated areas for varnish and paint application. These include the white paint room, the varnish room, and two spray paint bays where the topsides of finished boats are painted with AWLGRIP® (a durable self-leveling exterior finish paint used in the marine industry).

Additionally, varnishing and painting is performed in other areas. For example, some of the wood to be varnished is fixed on the boats and is varnished in place at various stages in the process. Occasionally Hinckley must apply exterior finish paint to boats outside of the designated spray booths.

The varnish room is vented with a large fan in a spray application bay. The exhaust is filtered to control particulate emissions that would otherwise pass through the fan to the outside. All paint in the white paint room is applied by hand. Two windows may be opened in this room to provide ventilation as

needed. Fans ventilate the two paint bays, where Hinckley currently applies exterior finish paint using spray guns. Given strict quality control requirements, Hinckley seals the building and filters all incoming air in order to eliminate any particulate that could become entrained in the paint that is applied to the boats.

B. BPT Determination

1. General

Hinckley was issued their initial air license (A-754-71-A-N) on March 3, 1999 that included a BPT finding that emission controls at the Southwest Harbor facility represented BACT. The current air license includes annual emission restriction for VOC (35 tons) and hazardous air pollutants (9.9 tons for any one HAP and 24.9 tons for total HAPs). The majority of VOC and HAP emissions are attributed to the use of resins, gelcoats, putties, paints, and varnishes in the production and repair of fiberglass boats.

Due to the low concentration of air pollutants and high air flow rates associated with Hinckley's various processes, conventional emission control devices are cost prohibitive. The U.S. Occupational Safety and Health Administration (OSHA) Permissible Exposure Limits (PEL) for styrene is 100 ppm, thus large amounts of ventilation air are necessary in order to operate below the PEL. Add-on VOC control equipment are inefficient at concentrations less than 1000 ppm. Add-on controls used in other VOC emitting industries have not been successfully applied to the boat building industry. Therefore, this BPT analysis addresses potential pollution prevention techniques for VOC and HAP control from the Southwest Harbor facility.

The Hinckley Company estimates VOC and HAP emissions based on monthly purchases of VOC and HAP containing material, which are assumed to be used in the month they were purchased. Styrene and methlylmethacrylate emissions are estimated using the Unified Emission Factor (UEF) estimation model for open molding of composites or through the use of a standard emission factor of 1% of available styrene for closed molding processes. All other VOC and HAP emission estimates are on a material balance basis.

The BPT determination focuses on the control of emissions from each process or activity at Hinckley. The activities include; Fiberglass Lamination and Gelcoat Application; Assembly and Maintenance, and Surface Coating

Operations. In addition, this analysis will review emission control options for clean-up solvents.

The criteria pollutants generated at Hinckley are VOC and particulate matter. The VOC emissions are comprised mainly of styrene. Although the majority of VOC emissions from Hinckley are attributed to the fiberglass lamination and gelcoat application process, finishing (i.e. paint and varnish), and from cleaning solvents, there is a potential for VOC and PM to be emitted from the other processes as well.

2. Fiberglass Lamination and Gelcoat Application

VOC/styrene emissions from the open-mold method of fiberglass lamination and gelcoat application are attributed to evaporation of resin or gelcoat overspray and vaporization from the applied resin or gel coat prior to polymerization. For this analysis, the actual VOC emitting equipment from open and closed mold resin and gelcoat application includes spray guns and a vacuum infusion system.

The maximum potential VOC emissions from fiberglass and gelcoat application are a function of the potential quantity of resin. Essentially all of the VOC present in the resin is styrene. Due to polymerization of the styrene monomer, not all of the VOC as delivered is volatilized. The majority of resin at Hinckley is applied using the vacuum infusion method which has virtually no Styrene emissions based on testing done on this process.

3. Examination of Pollution Prevention Methods

The pollution prevention options that are available to a polyester or vinyl ester resin operation are closed-mold technology, efficient resin application techniques, low styrene resins and gelcoats. Vapor suppressed resins containing a paraffin constituent have not been demonstrated to be technically feasible for this type of operation.

The most effective pollution prevention option available to Hinckley is the use of a closed-mold system. The closed-mold system reduces emissions by placing the resin material in a confining mold cavity and drawing a vacuum on the cavity. This technology reduces the exposed surface area of the part during the lamination and curing processes, thus reducing emissions. The use of a closed mold system reduces VOC emissions by more than 95% relative to uncontrolled levels. Hinckley is currently using this method on the majority of hulls and decks. To meet BPT requirements, Hinckley will continue the use of

the closed mold method when feasible to minimize VOC emissions. While Hinckley has had considerable success in reducing VOC emissions by using a closed mold vacuum infusion process for the majority of resin application there are several limitations that do not allow Hinckley to convert all open mold applications to closed mold applications.

The first two steps in the lamination and gelcoat process preclude the use of a closed mold method. The gelcoat, the smooth outer surface of the boat, must be applied on an open mold. Secondly, because gelcoat is susceptible to print-through by the structural layers of fiberglass and wood core, an initial layer of resin and glass mix must be applied to the gelcoat and allowed to cure. Once this protective “skin-coat” has been applied Hinckley can manually lay-up the structural materials and proceed with applying the rest of the resin using a vacuum infusion method when technically and economically feasible. By using the closed mold technique whenever feasible, Hinckley has succeeded in minimizing the use of resin thereby minimizing the amount of available styrene.

Since the styrene is drawn under vacuum between a plastic cover and the skin coat and allowed to cure while under a vacuum, styrene does not contact the air and as a result does not volatilize. There are two points at which styrene may contact the air during the vacuum infusion process. One is the container that the vacuum draws the resin out of and another is in the air that passes through the vacuum system pumps. Based on test data it has been demonstrated that emissions from the vacuum infusion process are approximately 0.013% of available styrene. Further, based on discussions with the equipment[®] vendor, emissions from open resin containers are negligible and as such were not included in the testing.

To minimize over-spray of resin and gelcoat during open molding, Hinckley currently uses airless spray guns. Airless spray guns are defined as non-atomized spray guns in which the coating fluid is not supplied to the gun under fluid pressure and air is not added to the gun. Currently Hinckley uses one gun that mixes air, catalyst and resin externally. Hinckley uses this gun to apply gelcoat and resin. This gun is also used as a chopper gun to apply both resin and chopped fiberglass strands simultaneously.

To meet BPT, Hinckley will continue the use of airless spray guns or manual application for open molding processes and that all future resin and gelcoat spray application equipment replacements and purchases will consist of either

airless spray guns or flow coaters. Flow coaters do not atomize the resin as the resin is internally mixed and ejected at low pressures without the assistance of air. It is not currently a viable option to use flow coaters for the application of gelcoat as it needs to be applied at a uniform consistency.

PM₁₀ emissions are generated by over-spray during the application of resin and gelcoat. To control these emissions and to meet BPT, Hinckley has installed filters on all forced ventilation points that are adjacent to the spray gun operations.

4. Assembly and Maintenance Activities: Including Grinding, Sanding, Buffing, & Welding

Fugitive particulate emissions are generated in the production of the hull molds from grinding, sanding, and cutting operations; and in the finishing of products from grinding sanding and buffing operations. Hinckley utilizes various particulate control systems that vent internally to control particulate emissions, resulting from woodworking, machining, buffing, grinding and sanding of wood, metal or fiberglass. Forced ventilation systems exhausting outside from the woodworking shop and the machine shop buffing room are each controlled by cyclones.

All particulate emitting maintenance activities such as sanding/grinding boat bottoms takes place indoors or are done in a manner to minimize particulate emissions.

VOC emissions in these areas are minimal and result from the use of adhesives, glues, putties, patching/modification, and cleaning chemicals. Given the minimal quantity of VOC emissions from these activities control equipment is not warranted or economically feasible. Hinckley is however, committed to good housekeeping practices and using low VOC content products, such as citrus and water based cleaners, when possible and will continue to review alternative products.

The use of cyclones to control forced ventilation systems that exhaust outside from the woodworking shop and machine shop buffing room represents BPT for particulate emissions.

5. Surface Coating Operations

Fugitive PM and VOC emissions are released from painting the topside of boats, varnishing wood components and interior parts, interior boat painting, and bottom painting.

Boats are typically painted in designated painting bays. . Both newly manufactured and existing boats are painted in these bays when feasible. Add on control equipment is not practical to control the small quantity of VOC emissions from this area. Pollution prevention options available to Hinckley are limited to improving paint transfer efficiencies to minimize paint use and particulate emissions. Hinckley, whenever possible will continue to use HVLP spray equipment and other methods that will increase the paint transfer efficiency as BPT.

Particulate emissions result from over-sprays in the topside painting bays. Hinckley proposes to filter all forced ventilation points (fans) and close all doors to the outside when painting. The control of exhaust points with particulate filters is proposed to meet BPT for PM. Occasionally Hinckley must apply exterior finish paint outside of the paint bays due to physical limitations. During the infrequent instances when Hinckley applies exterior finish paint outside, Hinckley proposes to minimize particulate emissions to meet BPT by limiting application to periods when there is little or no wind, and by applying the exterior finish paint in a manner as to minimize overspray.

Hinckley varnishes boats either in the varnish painting area or by hand for parts already installed. Transfer efficiency for varnish applied by hand is high and PM emissions are non-existent. Hinckley uses spray equipment in the varnish painting area. As such Hinckley uses a particulate filter to control PM emissions from varnish over-spray on the single paint bay exhaust fan. Hinckley has had little success with using HVLP guns to apply varnish due to the consistency of varnish and the quality requirements of their customers. Hinckley will continue to evaluate the performance of HVLP guns as well as low solvent coatings and water based coating as BPT.

Interior boat paint and bottom paint are applied by hand or spray gun. Consequently, transfer efficiency is high and particulate emissions are eliminated. Hinckley proposes as BPT to continue to search for low solvent or water based paints that will meet Hinckley's design specifications and quality requirements.

6. Clean-up Solvents

The use of clean-up solvents in each phase of manufacturing and maintenance at Hinckley has accounted for a significant portion of overall VOC emissions in the past.

There are no add on controls that are technically and economically feasible for the control of VOC emissions from cleanup solvents, therefore, this BPT analysis focuses on pollution prevention options.

A pollution prevention option available to decrease solvent emissions is substitution with less volatile solvents or water-based emulsions. The water-based emulsions must be maintained in a heated cleanup vessel at 100°F. The main disadvantages of using water based emulsions are the initial capital and annual costs associated with the heating systems, plus a solvent based cleaner must still be used for gel coat cleanup and spray gun cleaning and a rinse with a solvent based cleaner is required for equipment used for lamination. In light of their inherent disadvantages, Hinckley will continue to search for and test water based solvents in an effort to minimize emissions, whenever possible.

Acetone is frequently used to clean the gelcoat and resin application equipment. Acetone has been de-listed as a VOC and is not a Hazardous Air Pollutant (HAP). Hinckley will continue to reuse contaminated acetone until it is no longer effective.

The second alternative to using traditional solvents for cleanup is the use of a low vapor pressure solvent. The disadvantage to low vapor pressure is the cost can be two to four times the cost of traditional solvents and they are not always as effective. Hinckley is currently using a low vapor pressure cleaning solvent in several cleaning baths at the facility. Given Hinckley's success in using low vapor pressure solvents the company is still committed to researching options for broadening the application of these solvents.

Hinckley proposes as BPT to use, when feasible, lower vapor pressure cleanup solvents, in addition to researching and testing other cleanup products in an effort to decrease further the emissions to the atmosphere. Hinckley will store all materials not in use in containers secured with lids. All wash stations using solvent based solutions will utilize canisters with closing lids and clean up rags will be stored in sealed containers, when feasible (i.e. fire hazards). These housekeeping measures shall function to effectively control emissions to the atmosphere.

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7. Recordkeeping

As part of BPT for VOC and HAPs control, Hinckley shall maintain, and make available upon request, a current list of all resins and cleaning materials in use. This list shall provide the necessary data to determine compliance, including:

- a) Resin catalyst, and cleaning materials in use.
- b) Percent VOC by weight for each resin, and the pounds VOC per gallon of cleaning materials.
- c) The amount and type of resin materials purchased on a monthly basis
- d) The amount and type of cleaning materials purchased on a monthly basis

The monthly totals of VOCs and HAPS shall be calculated and tracked on a 12 month rolling average basis.

Hinckley shall maintain these records for 6 years and make them available upon request from the DEP.

8. Conclusions of BPT Summary

Based on the results of an air emission inventory for 2003, Hinckley emitted approximately 9 tons of VOC. Hinckley anticipates that production may grow and therefore emissions may increase, however, the facility wide VOC limit of 35 tons per year allows for production increases. The Hinckley Company proposes the following as meeting BPT for the control of VOC and HAPs:

- Continue to used the closed-mold technology whenever economically and technologically feasible for the manufacture of fiberglass boats and boat parts;
- Use controlled spray techniques when using mechanical sprayers for the application of gelcoats and resins;
- Use manual application methods for open-mold resin processes, when technologically appropriate;
- Limit overall facility-wide VOC emissions to 35 tons per year;
- Limit facility-wide HAP emissions to 9.9 TPY for any single HAP and 24.9 TPY for total HAPs;
- Conduct manufacturing and feasibility test trials of pollution prevention technologies such as low styrene resins and water-based or low vapor pressure cleaning solvents as they become commercially available;
- Maintain good housekeeping practices (i.e., lids on, proper storage of open containers, etc.);
- Maintain records of monthly resin, gel coat, paints, and solvent purchases facility-wide.

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In addition to VOC and HAP control, the Hinckley Company proposes the following as meeting BPT for the control of particulate matter (PM) from various boatyard activities:

- Control PM emissions from any surface coating process that vents to the ambient air via vent or duct through the use of a particulate filter such that opacity will not exceed 5% for any one six minute block average;
- Control PM emissions from any cutting, buffing, grinding, or sanding processes that vents to the ambient air via vent or duct through the use of a particulate filter such that opacity will not exceed 10% for any one six minute block average;
- Reduce the potential for fugitive PM emissions from any process conducted outside by limiting such activity to periods of calm winds or through the use of a shroud or wind curtain.

Due to the relatively small size of each individual unit, the fuel burning equipment at Southwest Harbor does not warrant the installation of add-on air pollution control devices. BPT for all fuel burning equipment will be the combustion of propane or distillate fuel oil with a sulfur content not to exceed 0.35% by weight. The Hinckley Company proposes annual boiler and heater fuel limits of 200,000 gallons of distillate fuel and 150,000 gallons of propane.

C. Annual Emission Restrictions

Hinckley shall be restricted to the following annual emissions, based on a 12 month rolling total:

Total Licensed Annual Emissions for the Facility
(used to calculate the annual license fee)

<u>Pollutant</u>	<u>Tons/yr</u>
PM	1.7
PM ₁₀	1.7
NO _x	5.0
SO ₂	3.9
CO	0.6
VOC	35.0
Single HAP	9.9
Total HAPS	24.9

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III. AMBIENT AIR QUALITY ANALYSIS

According to the Maine Regulations Chapter 115, the level of air quality analyses required for a renewal source shall be determined on a case-by case basis. Modeling and monitoring are not required for a renewal if the total emissions of any pollutant released do not exceed the following:

<u>Pollutant</u>	<u>Tons/Year</u>
PM	25
PM₁₀	25
SO₂	50
NO_x	100
CO	250

Based on the above total facility emissions, Hinckley is below the emissions level required for modeling and monitoring.

ORDER

Based on the above Findings and subject to conditions listed below the Department concludes that the emissions from this source:

- will receive Best Practical Treatment,
- will not violate applicable emission standards,
- will not violate applicable ambient air quality standards in conjunction with emissions from other sources.

The Department hereby grants Air Emission License A-754-71-D-R/A subject to the following conditions:

STANDARD CONDITIONS

- (1) Employees and authorized representatives of the Department shall be allowed access to the licensee's premises during business hours, or any time during which any emissions units are in operation, and at such other times as the Department

deems necessary for the purpose of performing tests, collecting samples, conducting inspections, or examining and copying records relating to emissions (38 MRSA §347-C).

- (2) The licensee shall acquire a new or amended air emission license prior to commencing construction of a modification, unless specifically provided for in Chapter 115. [MEDEP Chapter 115]
- (3) Approval to construct shall become invalid if the source has not commenced construction within eighteen (18) months after receipt of such approval or if construction is discontinued for a period of eighteen (18) months or more. The Department may extend this time period upon a satisfactory showing that an extension is justified, but may condition such extension upon a review of either the control technology analysis or the ambient air quality standards analysis, or both. [MEDEP Chapter 115]
- (4) The licensee shall establish and maintain a continuing program of best management practices for suppression of fugitive particulate matter during any period of construction, reconstruction, or operation which may result in fugitive dust, and shall submit a description of the program to the Department upon request. [MEDEP Chapter 115]
- (5) The licensee shall pay the annual air emission license fee to the Department, calculated pursuant to Title 38 M.R.S.A. §353. [MEDEP Chapter 115]
- (6) The license does not convey any property rights of any sort, or any exclusive privilege. [MEDEP Chapter 115]
- (7) The licensee shall maintain and operate all emission units and air pollution systems required by the air emission license in a manner consistent with good air pollution control practice for minimizing emissions. [MEDEP Chapter 115]
- (8) The licensee shall maintain sufficient records to accurately document compliance with emission standards and license conditions and shall maintain such records for a minimum of six (6) years. The records shall be submitted to the Department upon written request. [MEDEP Chapter 115]
- (9) The licensee shall comply with all terms and conditions of the air emission license. The filing of an appeal by the licensee, the notification of planned changes or anticipated noncompliance by the licensee, or the filing of an

application by the licensee for a renewal of a license or amendment shall not stay any condition of the license. [MEDEP Chapter 115]

- (10) The licensee may not use as a defense in an enforcement action that the disruption, cessation, or reduction of licensed operations would have been necessary in order to maintain compliance with the conditions of the air emission license. [MEDEP Chapter 115]
- (11) In accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department, the licensee shall:
 - A. perform stack testing to demonstrate compliance with the applicable emission standards under circumstances representative of the facility's normal process and operating conditions:
 1. within sixty (60) calendar days of receipt of a notification to test from the Department or EPA, if visible emissions, equipment operating parameters, staff inspection, air monitoring or other cause indicate to the Department that equipment may be operating out of compliance with emission standards or license conditions; or
 2. pursuant to any other requirement of this license to perform stack testing.
 - B. install or make provisions to install test ports that meet the criteria of 40 CFR Part 60, Appendix A, and test platforms, if necessary, and other accommodations necessary to allow emission testing; and
 - C. submit a written report to the Department within thirty (30) days from date of test completion.

[MEDEP Chapter 115]
- (12) If the results of a stack test performed under circumstances representative of the facility's normal process and operating conditions indicate emissions in excess of the applicable standards, then:
 - A. within thirty (30) days following receipt of such test results, the licensee shall re-test the non-complying emission source under circumstances representative of the facility's normal process and operating conditions and in accordance with the Department's air emission compliance test protocol and 40 CFR Part 60 or other method approved or required by the Department; and
 - B. the days of violation shall be presumed to include the date of stack test and each and every day of operation thereafter until compliance is demonstrated under normal and representative process and operating conditions, except to

the extent that the facility can prove to the satisfaction of the Department that there were intervening days during which no violation occurred or that the violation was not continuing in nature; and

- C. the licensee may, upon the approval of the Department following the successful demonstration of compliance at alternative load conditions, operate under such alternative load conditions on an interim basis prior to a demonstration of compliance under normal and representative process and operating conditions.

[MEDEP Chapter 115]

- (13) Notwithstanding any other provisions in the State Implementation Plan approved by the EPA or Section 114(a) of the CAA, any credible evidence may be used for the purpose of establishing whether a person has violated or is in violation of any statute, regulation, or Part 70 license requirement. [MEDEP Chapter 115]
- (14) The licensee shall maintain records of malfunctions, failures, downtime, and any other similar change in operation of air pollution control systems or the emissions unit itself that would affect emission and that is not consistent with the terms and conditions of the air emission license. The licensee shall notify the Department within two (2) days or the next state working day, whichever is later, of such occasions where such changes result in an increase of emissions. The licensee shall report all excess emissions in the units of the applicable emission limitation. [MEDEP Chapter 115]
- (15) Upon written request from the Department, the licensee shall establish and maintain such records, make such reports, install, use and maintain such monitoring equipment, sample such emissions (in accordance with such methods, at such locations, at such intervals, and in such a manner as the Department shall prescribe), and provide other information as the Department may reasonably require to determine the licensee's compliance status. [MEDEP Chapter 115]

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SPECIFIC CONDITIONS

(16) Hinckley is licensed to operate the following fuel burning equipment:

Unit Identification	Maximum Heat Input Capacity (MMBtu/hr)	Fuel type	Firing Rate (gal/hr)
Boiler #1 (Main Building)	1.9	#2 fuel oil	13.6
Boiler #2 (Main Building)	1.9	#2 fuel oil	13.6
Boiler #3 (64 Building)	1.6	#2 fuel oil	11.4
Boiler #4 (Fiberglass Building)	1.7	#2 fuel oil	12.3
Boiler #5 (Fiberglass Building)	1.8	#2 fuel oil	13
Make-up Air Heater (Production Spray Booth)	2.5	Propane	27.3
Make-up Air Heater (Production Spray Booth)	2.5	Propane	27.3
Make-up Air Heater (Service Spray Booth)	1.3	Propane	14.4

(17) Hinckley shall limit short-term emissions from the boilers and propane units to the following:

	(Propane units)	(Oil-fired boilers)
Pollutant	lb/hr *	lb/hour **
PM	0.10	0.23
PM ₁₀	0.10	0.23
SO ₂	0.01	0.68
NO _x	0.37	0.38
CO	0.05	0.07
VOC	0.10	0.02

* Note the calculated maximum lb/hour emission limit is based on the largest propane unit, operating at 2.5 MMBtu/hr.

** Note the calculated maximum lb/hour emission limit is based on the largest oil-fired boiler, operating at 1.9 MMBtu/hr.

(18) Visible emissions from the boilers' stacks shall not exceed 10% opacity on a 6-minute block average basis. Visible emissions from the propane units shall not exceed 10% opacity on a 6-minute block average, except for no more than 2 six-minute block averages in a 3-hour period.

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- (19) Hinckley shall limit annual #2 fuel oil use to 200,000 gallons with a maximum fuel sulfur content of 0.35% by weight, based on a 12 month rolling total. The facility shall keep fuel receipts to demonstrate compliance with the fuel use and sulfur limit. Hinckley shall limit propane to less than 150,000 gallons per year based on a 12-month rolling total. Fuel receipts shall be kept to demonstrate compliance with propane use.
- (20) Hinckley shall maintain the filters on the spray paint booths to minimize PM emissions and keep opacity to less than 5%, based on a 6-minute block average. Hinckley shall record the amount and VOC content (lb VOC/gallon) of all paint purchases. Monthly paint purchases shall be maintained.
- (21) Process Emission
- a. Hinckley shall maintain good housekeeping practices (close lids, proper storage of open container, etc.) and control emissions from the entire existing and future processes to less than: 35.0 tons/year of VOC emissions, 9.9 tons/year of a single HAP and 24.9 tons/year of total HAPs.
 - b. Hinckley shall calculate these emissions on a 12-month rolling total basis, based on the method as specified Condition (23).
- (22) To ensure compliance with BPT for VOC and HAPS, Hinckley shall record the quantity of resins, gel coats, paints, and solvents used at the facility and also the VOC and HAP content of each, and any other applicable information for each of the following:
- A. Monthly Facility Purchases for use at the Southwest Harbor facility
 - B. Quantity shipped off Site
- (23) The mass balance equation shall be defined as follows to determine monthly VOC emissions for the applicable boat manufacturing departments (utilizing the data collected from Condition (22) and any applicable data:

- A. Monthly Facility Purchases
- B. Quantity Shipped offsite

$$\text{Monthly VOC Emissions} = (A \times \text{VOC content}) - (B \times \text{VOC content})$$

When calculating VOC emissions from open molding resin and gel coat procedures, the current version of the American Composites Manufacturers

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Association (AMCA, formerly the CFA) emission factors shall be used in the “Monthly VOC Emissions” equation.

The styrene emission rate for the vacuum infusion method is assumed to be 1%.

- (24) To ensure compliance with BPT for VOC control, Hinckley shall continue research and manufacturing test trials of pollution prevention technologies (low styrene resins, closed mold systems, etc.). An annual report documenting the research and test trial results for the previous year shall be available for inspection to the Department by request.
- (25) Hinckley shall continue to use airless spray guns for the application of gelcoats and resins and shall replace standard spray guns with high transfer efficiency units such as airless spray equipment and flow coaters as they wear out.
- (26) Hinckley shall properly maintain all dust collection equipment in the facility and make repairs as necessary to prevent system leakage.
- (27) Particulate matter emissions from cyclones and spray booth filters are generally unquantified; therefore particulate matter emissions from cyclones shall be limited to 10% opacity based on a 6 minute block average and 5% opacity based on a 6 minute block average for spray booth filters.
- (28) **Parts Washer**
Parts washers at Hinckley are subject to MEDEP Chapter 130.
 - A. Hinckley shall keep records of the amount of solvent added to each parts washer. [MEDEP Chapter 115, BPT]
 - B. The following are exempt from the requirements of Chapter 130 [MEDEP Chapter 130]:
 - 1. Solvent cleaners using less than two liters (68 oz) of cleaning solvent with a vapor pressure of 1.00 mmHg, or less, at 20° C (68° F);
 - 2. Wipe cleaning; and,
 - 3. Cold cleaning machines using solvents containing less than or equal to 5% VOC by weight.
 - C. The following standards apply to remote reservoir cold cleaning machines that are applicable sources under Chapter 130.

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1. Hinckley shall attach a permanent conspicuous label to each unit summarizing the following operational standards [MEDEP Chapter 130]:
 - (i) Waste solvent shall be collected and stored in closed containers.
 - (ii) Cleaned parts shall be drained of solvent directly back to the cold cleaning machine by tipping or rotating the part for at least 15 seconds or until dripping ceases, whichever is longer.
 - (iii) Flushing of parts shall be performed with a solid solvent spray that is a solid fluid stream (not a fine, atomized or shower type spray) at a pressure that does not exceed 10 psig. Flushing shall be performed only within the freeboard area of the cold cleaning machine.
 - (iv) The cold cleaning machine shall not be exposed to drafts greater than 40 meters per minute when the cover is open.
 - (v) Sponges, fabric, wood, leather, paper products and other absorbent materials shall not be cleaned in the degreaser.
 - (vi) When a pump-agitated solvent bath is used, the agitator shall be operated to produce no observable splashing of the solvent against the tank walls or the parts being cleaned. Air agitated solvent baths may not be used.
 - (vii) Spills during solvent transfer shall be cleaned immediately. Sorbent material shall be immediately stored in covered containers.
 - (viii) Work area fans shall not blow across the opening of the degreaser unit.
 - (ix) The solvent level shall not exceed the fill line.
2. The remote reservoir cold cleaning machine shall be equipped with a perforated drain with a diameter of not more than six inches. [MEDEP Chapter 130, BPT]

(29) Fugitive Emissions

Visible emissions from a fugitive emission source (including stockpiles and roadways) shall not exceed an opacity of 20 percent, except for no more than five (5) minutes in any 1-hour period. Compliance shall be determined by an aggregate of the individual fifteen (15)-second opacity observations which exceed 20 percent in any one (1) hour. [MEDEP Chapter 101]

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(30) Payment of Annual License Fee

Hinckley shall pay the annual air emission license fee within 30 days of March 30th of each year. Pursuant to 38 MRSA §353-A, failure to pay this annual fee in the stated timeframe is sufficient grounds for revocation of the license under 38 MRSA §341-D, subsection 3.

DONE AND DATED IN AUGUSTA, MAINE THIS DAY OF 2005.

DEPARTMENT OF ENVIRONMENTAL PROTECTION

BY: _____
DAWN R. GALLAGHER, COMMISSIONER

The term of this license shall be five (5) years from the signature date above.

PLEASE NOTE ATTACHED SHEET FOR GUIDANCE ON APPEAL PROCEDURES

Date of initial receipt of application: February 27, 2004

Date of application acceptance: March 3, 2004

Date filed with Board of Environmental Protection: _____

This order prepared by Edwin Cousins , Bureau of Air Quality